

SEQUENCE LISTING

<110> Donoho, Gregory
Scoville, John
Turner, C. Alexander Jr.
Friedrich, Glenn
Zambrowicz, Brian
Sands, Arthur T.

<120> Novel Human Membrane Proteins and
Polynucleotides Encoding the Same

<130> LEX-0104-USA

<150> US 60/169,427

<151> 1999-12-07

<160> 53

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 678

<212> DNA

<213> Homo sapiens

<400> 1

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<211> 225

<212> PRT

<213> Homo sapiens

<400> 2

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Leu	Gly	Ser	Asn	Asn	Met	Tyr	Asp	Ile	Phe	Asn	Leu	Asn	Asp	Lys	Ala
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Leu	Cys	Phe	Thr	Lys	Cys	Arg	Gln	Ser	Gly	Ser	Asp	Ser	Cys	Asn	Val
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Glu Asn Leu Gln Arg Tyr Trp Leu Asn Tyr Glu Ala His Leu Met Lys
 65 70 75 80
 Glu Gly Leu Thr Gln Lys Val Asn Thr Pro Phe Leu Lys Ala Leu Val
 85 90 95
 Gln Asn Leu Ser Thr Asn Thr Ala Glu Asp Phe Tyr Phe Ser Leu Glu
 100 105 110
 Pro Ser Gln Val Pro Arg Gln Val Met Lys Asp Glu Asp Lys Pro Pro
 115 120 125
 Asp Arg Val Arg Leu Pro Lys Ser Leu Phe Arg Ser Leu Pro Gly Asn
 130 135 140
 Arg Ser Val Val Arg Leu Ala Val Thr Ile Leu Asp Ile Gly Pro Gly
 145 150 155 160
 Thr Leu Phe Lys Gly Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val
 165 170 175
 Leu Asn Asn Arg Leu Val Gly Leu Ser Val Gly Gln Met His Val Thr
 180 185 190
 Lys Leu Ala Glu Pro Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro
 195 200 205
 Pro Val Ser Pro Leu Leu Arg Pro Gly Ser His Cys Arg Ala Asp Arg
 210 215 220

Thr
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<210> 3
 <211> 1527
 <212> DNA
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 <211> 508
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Leu Cys Phe Thr Lys Cys Arg Gln Ser Gly Ser Asp Ser Cys Asn Val
 50 55 60
 Glu Asn Leu Gln Arg Tyr Trp Leu Asn Tyr Glu Ala His Leu Met Lys
 65 70 75 80
 Glu Gly Leu Thr Gln Lys Val Asn Thr Pro Phe Leu Lys Ala Leu Val
 85 90 95
 Gln Asn Leu Ser Thr Asn Thr Ala Glu Asp Phe Tyr Phe Ser Leu Glu
 100 105 110
 Pro Ser Gln Val Pro Arg Gln Val Met Lys Asp Glu Asp Lys Pro Pro
 115 120 125
 Asp Arg Val Arg Leu Pro Lys Ser Leu Phe Arg Ser Leu Pro Gly Asn
 130 135 140
 Arg Ser Val Val Arg Leu Ala Val Thr Ile Leu Asp Ile Gly Pro Gly
 145 150 155 160
 Thr Leu Phe Lys Gly Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val
 165 170 175
 Leu Asn Asn Arg Leu Val Gly Leu Ser Val Gly Gln Met His Val Thr
 180 185 190
 Lys Leu Ala Glu Pro Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro
 195 200 205
 Pro Asn Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr
 210 215 220
 Thr Gly Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu
 225 230 235 240
 Gly Thr Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu
 245 250 255
 Arg Pro Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser
 260 265 270
 Gln Ala Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile
 275 280 285
 Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
 290 295 300
 Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn
 305 310 315 320
 Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala
 325 330 335
 Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
 340 345 350
 Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val
 355 360 365
 Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
 370 375 380
 Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
 385 390 395 400

Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser
 405 410 415
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 420 425 430
 Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
 435 440 445
 Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr
 450 455 460
 Ala Val Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu
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 <212> DNA
 <213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

<400> 6
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 35 40 45
 Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
 50 55 60
 Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
 65 70 75 80
 Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
 85 90 95
 Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Asn Leu Ala

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Phe	Leu	Val	Asn	Gly	Ser
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Trp	Ala	Arg	Gly	Ala	Val
130					
Trp	Met	Gly	Leu	Glu	Ala
145					
Phe	Asn	Thr	Tyr	Phe	Gly
165					
Trp	Gly	Leu	Pro	Ala	Leu
180					
Tyr	Gly	Leu	Tyr	Thr	Ile
195					
Leu	Cys	Trp	Phe	Arg	Glu
210					
Val	His	Gly	Tyr	Phe	Leu
225					
Ala	Leu	Val	Val	Trp	Lys
245					
Lys	Glu	Arg	Gly	Lys	Asn
260					
Ser	Ser	Leu	Ala	Ser	Trp
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Leu	Arg	Pro	Glu	Gly	Gln
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<210> 7

<211> 1080

<212> DNA

<213> Homo sapiens

<400> 7

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gccctctata	tcaccgtcca	cggtactctc	ctcatcaact	tctctcttgg	catggtggtc	900
ctggccctcg	tggtctgtgaa	gatcttcacc	ctgtccccgt	ctacagcggt	caaggagcgg	960
gggaagaacc	ggaagaaggt	gctcaccctg	ctggggcctc	cgagccttgc	aagttgggtg	1020
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<210> 8

<211> 359

<212> PRT

<213> Homo sapiens

<400> 8

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 Val Gly Leu Ser Val Gly Gln Met His Val Thr Lys Leu Ala Glu Pro
 35 40 45
 Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
 50 55 60
 Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly Asp Trp Ser
 65 70 75 80
 Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr Val Cys Cys
 85 90 95
 Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro Thr Leu Asp
 100 105 110
 Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
 115 120 125
 Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr Ala Phe Leu
 130 135 140
 Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
 145 150 155 160
 Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe Leu Val
 165 170 175
 Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
 180 185 190
 Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
 195 200 205
 Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
 210 215 220
 Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
 225 230 235 240
 Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
 245 250 255
 Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
 260 265 270
 Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
 275 280 285
 Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
 290 295 300
 Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
 305 310 315 320
 Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu
 325 330 335
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 Glu Gly Gln Asn His Val Ile
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<210> 9

<211> 702

<212> DNA

<213> Homo sapiens

<400> 9

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<210> 10

<211> 233

<212> PRT

<213> Homo sapiens

<400> 10

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35 40 45	
Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp	
50 55 60	
Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp	
65 70 75 80	
Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe	
85 90 95	
Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp	
100 105 110	
Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr	
115 120 125	
Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu	
130 135 140	
Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val	
145 150 155 160	
His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala	
165 170 175	
Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys	
180 185 190	
Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser	
195 200 205	
Ser Leu Ala Ser Trp Val Ser Ile Val His Leu Trp Ser Asn Gln Leu	
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Arg Pro Glu Gly Gln Asn His Val Ile	
225 230	

<210> 11

<211> 489

<212> DNA

<213> Homo sapiens

<400> 11

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<210> 12
 <211> 162
 <212> PRT
 <213> Homo sapiens

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 Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
 35 40 45
 Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
 50 55 60
 Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
 65 70 75 80
 Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
 85 90 95
 Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
 100 105 110
 Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Lys
 115 120 125
 Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu Ala Ser Trp Val Ser
 130 135 140
 Ile Val His Leu Trp Ser Asn Gln Leu Arg Pro Glu Gly Gln Asn His
 145 150 155 160
 Val Ile

<210> 13
 <211> 1515
 <212> DNA
 <213> Homo sapiens

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tcccgctgcta	cagcggtcaa	ggagcggggg	aagaaccggt	gctcacctctg	ctgggcctctc	1440
cgagccttgc	aagtgtgggtg	tccatcgctc	atctctggtc	caatcagctg	cgaccagaag	1500
ggcagaatca	tgtga					1515

<210> 14

<211> 504

<212> PRT

<213> Homo sapiens

<400> 14

Met	Ala	Thr	Pro	Arg	Gly	Leu	Gly	Ala	Leu	Leu	Leu	Leu	Leu	Leu	Leu
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Pro	Thr	Ser	Gly	Gln	Glu	Lys	Pro	Thr	Glu	Gly	Pro	Arg	Asn	Thr	Cys
			20					25					30		
Leu	Gly	Ser	Asn	Asn	Met	Tyr	Asp	Ile	Phe	Asn	Leu	Asn	Asp	Lys	Ala
			35				40					45			
Leu	Cys	Phe	Thr	Lys	Cys	Arg	Gln	Ser	Gly	Ser	Asp	Ser	Cys	Asn	Val
	50					55					60				
Glu	Asn	Leu	Gln	Arg	Tyr	Trp	Leu	Asn	Tyr	Glu	Ala	His	Leu	Met	Lys
	65				70					75				80	
Glu	Gly	Leu	Thr	Gln	Lys	Val	Asn	Thr	Pro	Phe	Leu	Lys	Ala	Leu	Val
				85				90					95		
Gln	Asn	Leu	Ser	Thr	Asn	Thr	Ala	Glu	Asp	Phe	Tyr	Phe	Ser	Leu	Glu
				100				105					110		
Pro	Ser	Gln	Val	Pro	Arg	Gln	Val	Met	Lys	Asp	Glu	Asp	Lys	Pro	Pro
			115				120					125			
Asp	Arg	Val	Arg	Leu	Pro	Lys	Ser	Leu	Phe	Arg	Ser	Leu	Pro	Gly	Asn
			130				135					140			
Arg	Ser	Val	Val	Arg	Leu	Ala	Val	Thr	Ile	Leu	Asp	Ile	Gly	Pro	Gly
				145						155				160	
Thr	Leu	Phe	Lys	Gly	Pro	Arg	Leu	Gly	Leu	Gly	Asp	Gly	Ser	Gly	Val
				165					170					175	
Leu	Asn	Asn	Arg	Leu	Val	Gly	Leu	Ser	Val	Gly	Gln	Met	His	Val	Thr
			180					185					190		
Lys	Leu	Ala	Glu	Pro	Leu	Glu	Ile	Val	Phe	Ser	His	Gln	Arg	Pro	Pro
			195				200					205			
Pro	Asn	Met	Thr	Leu	Thr	Cys	Val	Phe	Trp	Asp	Val	Thr	Lys	Gly	Thr
			210				215					220			
Thr	Gly	Asp	Trp	Ser	Ser	Glu	Gly	Cys	Ser	Thr	Glu	Val	Arg	Pro	Glu
				225			230				235			240	
Gly	Thr	Val	Cys	Cys	Cys	Asp	His	Leu	Thr	Phe	Phe	Ala	Leu	Leu	Leu
				245				250					255		
Arg	Pro	Thr	Leu	Asp	Gln	Ser	Thr	Val	His	Ile	Leu	Thr	Arg	Ile	Ser
			260					265					270		
Gln	Ala	Gly	Cys	Gly	Val	Ser	Met	Ile	Phe	Leu	Ala	Phe	Thr	Ile	Ile
			275				280								

Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
 290 295 300
 Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn
 305 310 315 320
 Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala
 325 330 335
 Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
 340 345 350
 Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val
 355 360
 Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
 370 375 380
 Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
 385 390 395 400
 Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser
 405 410 415
 Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr
 420 425 430
 Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
 435 440 445
 Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr
 450 455 460
 Ala Val Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser
 465 470 475 480
 Arg Ala Leu Gln Val Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser
 485 490 495
 Cys Asp Gln Lys Gly Arg Ile Met
 500

<210> 15

<211> 885

<212> DNA

<213> Homo sapiens

<400> 15

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tttttcgcc	tgctcctgag	accacacctg	gaccagtcca	cggtgcatat	cctcacacgc	180
atctccacgg	cgggctgtgg	ggctcccatg	atcttctctg	ccttcacact	tattctttat	240
gcctttctga	ggctttcccg	ggagagggtc	aagtcagaag	atgccccaaa	gatccacgtg	300
gccttggttg	gcagcctgtt	cctcctgaat	ctggccttct	tggtcaatgt	ggggagtggc	360
tcaaagggtt	ctgatgctgc	ctgctggggc	cggggggctg	tcttcacta	cttctgctc	420
tgtgccttca	cctggatggg	ccttgaagcc	ttccacctct	acctgctcgc	tgctcagggtc	480
ttcaacacct	acttcgggca	ctaactctcg	aagctgagcc	tggtgggctg	gggctcgccc	540
gcctgatggt	tcactggcac	tgggagtggc	aacagctacg	gcctctacac	catccgtgat	600
agggagaaac	gcacctctct	ggagctatgc	tggttccgtg	aaggggacaa	catgtacggc	660
ctctatatca	ccgtccacgg	ctaacttctc	atcaccttcc	tctttggcat	gggtgtctct	720
gccttggttg	tctggaagat	cttcaccctg	tcccggtcta	cagcgggtcaa	ggagcggggg	780
aagaaccgtg	ctcaaccctg	ctgggcctct	cgagccttgc	aagttgggtg	tccatcgtcc	840
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<210> 16

<211> 294

<212> PRT

<213> Homo sapiens

<400> 16

Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly
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 Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr
 20 25 30
 Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro
 35 40 45
 Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
 50 55 60
 Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
 65 70 75 80
 Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
 85 90 95
 Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
 100 105 110
 Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
 115 120 125
 Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
 130 135 140
 Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
 145 150 155 160
 Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
 165 170 175
 Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser
 180 185 190
 Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu
 195 200 205
 Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr
 210 215 220
 Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
 225 230 235 240
 Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val
 245 250 255
 Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala
 260 265 270
 Leu Gln Val Gly Cys Pro Ser Ile Ser Gly Pro Ile Ser Cys Asp
 275 280 285
 Gln Lys Gly Arg Ile Met
 290

<210> 17

<211> 1068

<212> DNA

<213> Homo sapiens

<400> 17

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 ctgggagatg gcagcggcgt gttgaacaat cgccctgggtg gtttgagtgt gggacaaaatg 120
 catgtcacca agctggctga gccctcggag atcgtctctt ctaccacgag accgccccct 180
 aacatgaccc tcacctgtgt attctgggat gtgactaaag ggaccactgg agactgggtct 240
 tctgagggct gctccacgga ggtcagacct gaggggacgg tgtgtgtctg tgaccacctg 300
 acctttttgc cctgtctct gagaccacc ttggaccagt ccacgggtgca tatctcaca 360
 cgcctctccc aggcgggctg tggggctccc atgatcttcc tggccttcac cattattctt 420
 tatgcctttc tgaggctttc ccgggagagg ttcaagtcag aagatgcccc aaagatccac 480
 gtggccctgg gtggcagcct gtctctctgt aatctggcct tcttggtcaa tgtggggagt 540
 ggctcaaaag ggtctgatgc tgccctgtcg gcccgggggg ctgtcttcca ctacttctg 600

ctctgtgcct	tcacctggat	gggccttgaa	gccttcacc	tctacctgct	cgctgtcagg	660
gtcttcaaca	cctacttcgg	gcactacttc	ctgaagctga	gcctgggtggg	ctgggggctg	720
cccgccctga	tggtcatcgg	cactgggagt	gccaacagct	acggcctcta	caccatccgt	780
gataggggaga	accgcacctc	tctggagcta	tgctgggtcc	gtgaagggac	aaccatgtac	840
gccctctata	tcaccgtcca	cggtactatt	ctcatcacct	tctcttttgg	catgggtggtc	900
ctggccctgg	tggtctggaa	gatcttcacc	ctgtcccgtg	ctacagcggt	caaggagcgg	960
ggggaagaacc	gggtgtcacc	ctgtggggcc	tctcgagcct	tgcaagttgg	gtgtccatcg	1020
tccatctctg	gtccaatcag	ctgcgaccag	aagggcagaa	tcagtgtga		1068

<210> 18

<211> 355

<212> PRT

<213> Homo sapiens

<400> 18

Met	Ala	Pro	Ser	Ala	Ala	Trp	Pro	Pro	Arg	Ser	Pro	Leu	Ser	Gln	Gly
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Pro	Arg	Leu	Gly	Leu	Gly	Asp	Gly	Ser	Gly	Val	Leu	Asn	Asn	Arg	Leu
			20					25					30		
Val	Gly	Leu	Ser	Val	Gly	Gln	Met	His	Val	Thr	Lys	Leu	Ala	Glu	Pro
		35				40						45			
Leu	Glu	Ile	Val	Phe	Ser	His	Gln	Arg	Pro	Pro	Pro	Asn	Met	Thr	Leu
		50				55					60				
Thr	Cys	Val	Phe	Trp	Asp	Val	Thr	Lys	Gly	Thr	Thr	Gly	Asp	Trp	Ser
65					70				75						80
Ser	Glu	Gly	Cys	Ser	Thr	Glu	Val	Arg	Pro	Glu	Gly	Thr	Val	Cys	Cys
				85					90				95		
Cys	Asp	His	Leu	Thr	Phe	Phe	Ala	Leu	Leu	Leu	Arg	Pro	Thr	Leu	Asp
			100					105					110		
Gln	Ser	Thr	Val	His	Ile	Leu	Thr	Arg	Ile	Ser	Gln	Ala	Gly	Cys	Gly
			115				120					125			
Val	Ser	Met	Ile	Phe	Leu	Ala	Phe	Thr	Ile	Ile	Leu	Tyr	Ala	Phe	Leu
		130				135					140				
Arg	Leu	Ser	Arg	Glu	Arg	Phe	Lys	Ser	Glu	Asp	Ala	Pro	Lys	Ile	His
145					150				155						160
Val	Ala	Leu	Gly	Gly	Ser	Leu	Phe	Leu	Leu	Asn	Leu	Ala	Phe	Leu	Val
			165					170					175		
Asn	Val	Gly	Ser	Gly	Ser	Lys	Gly	Ser	Asp	Ala	Ala	Cys	Trp	Ala	Arg
			180					185					190		
Gly	Ala	Val	Phe	His	Tyr	Phe	Leu	Leu	Cys	Ala	Phe	Thr	Trp	Met	Gly
		195					200					205			
Leu	Glu	Ala	Phe	His	Leu	Tyr	Leu	Leu	Ala	Val	Arg	Val	Phe	Asn	Thr
		210					215				220				
Tyr	Phe	Gly	His	Tyr	Phe	Leu	Lys	Leu	Ser	Leu	Val	Gly	Trp	Gly	Leu
225					230				235						240
Pro	Ala	Leu	Met	Val	Ile	Gly	Thr	Gly	Ser	Ala	Asn	Ser	Tyr	Gly	Leu
			245					250					255		
Tyr	Thr	Ile	Arg	Asp	Arg	Glu	Asn	Arg	Thr	Ser	Leu	Glu	Leu	Cys	Trp
		260					265					270			
Phe	Arg	Glu	Gly	Thr	Thr	Met	Tyr	Ala	Leu	Tyr	Ile	Thr	Val	His	Gly
		275					280					285			
Tyr	Phe	Leu	Ile	Thr	Phe	Leu	Phe	Gly	Met	Val	Val	Leu	Ala	Leu	Val
		290				295					300				
Val	Trp	Lys	Ile	Phe	Thr	Leu	Ser	Arg	Ala	Thr	Ala	Val	Lys	Glu	Arg
305					310					315				320	
Gly	Lys	Asn	Arg	Cys	Ser	Pro	Cys	Trp	Ala	Ser	Arg	Ala	Leu	Gln	Val

325 330 335
 Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser Cys Asp Gln Lys Gly
 340 345 350
 Arg Ile Met
 355

<210> 19
 <211> 690
 <212> DNA
 <213> Homo sapiens

<400> 19
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 ctgttctctcc tgaatctggc ctctcttggtc aatgtgggga gtggctcaaa ggggtctgat 180
 gctgctgctgt gggccccgggg ggctgtcttc cactacttcc tgcctctgtgc ctccacctgg 240
 atggggccttg aagccttcca cctctacctg ctgctgtgta gggctctcaa cactacttcc 300
 gggcactact tctgaagct gagcctgggt ggctggggcc tgccccccct gatggctatc 360
 ggcaactggga gtgccaaacag ctacggcctc tacaccatcc gtgataggga gaaccgcacc 420
 tctctggagc tatgtgtgtt ccgtgaaggg acaaccatgt acgccctcta tatcaccgtc 480
 caccggctact tctctcatcac ctctctcttt ggcattgggt tcttggccct ggtgtgtctgg 540
 aagatcttca cctctgtccg tgctacacgc gtcaaggagc gggggaagaa ccggtgtctca 600
 cctctgtggg cctctcgagc ctgtcaagtt ggggtgtccat cgtccatctc tgggtccaatc 660
 agctgcgacc agaaggcgag aatcatgtga 690

<210> 20
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Gly Ala Pro His Gly Ser Cys Gly Pro Leu Gly Pro Leu Ile Ser
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 His Pro Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys
 20 25 30
 Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe
 35 40 45
 Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
 50 55 60
 Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
 65 70 75 80
 Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
 85 90 95
 Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
 100 105 110
 Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
 115 120 125
 Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
 130 135 140
 Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
 145 150 155 160
 His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
 165 170 175
 Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
 180 185 190
 Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Leu

195 200 205
 Gln Val Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser Cys Asp Gln
 210 215 220
 Lys Gly Arg Ile Met
 225

<210> 21
 <211> 477
 <212> DNA
 <213> Homo sapiens

<400> 21
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 gccagggtgg gggccctccc acagcgggag agccaggat tgaatgggtgg aaatgggaga 120
 ggcaccttca cagacagaaa agctcagcca ggggaactcc tgggtttgct ggccagaggt 180
 accactccca gtcccaccac agctgcccc tctccagat gctgggtccg tgaagggaca 240
 accatgtacg cctcttatat caccgtccac ggctactccc tcatcacctt cctctttggc 300
 atgggtgttc tggccctggt ggtctggaag atcttcacc tgteccgtgc tacagcggtc 360
 aaggagcggg ggaagaaccg gtgctcacc tgctgggcct ctcgagcctt gcaagttggg 420
 tgtccatcgt ccactctctg tccaatcagc tgcgaccaga agggcagaat catgtga 477

<210> 22
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 22
 Met Gly Gln Met Lys His Val Phe Glu Val Thr Leu Ala Leu Lys Arg
 1 5 10 15
 His Gln Thr Gly Ala Arg Trp Arg Pro Leu Pro Gln Arg Glu Ser Gln
 20 25 30
 Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
 35 40 45
 Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
 50 55 60
 Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
 65 70 75 80
 Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
 85 90 95
 Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
 100 105 110
 Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Cys
 115 120 125
 Ser Pro Cys Trp Ala Ser Arg Ala Leu Gln Val Gly Cys Pro Ser Ser
 130 135 140
 Ile Ser Gly Pro Ile Ser Cys Asp Gln Lys Gly Arg Ile Met
 145 150 155

<210> 23
 <211> 1566
 <212> DNA
 <213> Homo sapiens

<400> 23
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atcttcaact tgaatgacaa ggctttgtgc ttcaccaagt gcaggcagtc gggcagcgac 180
 tctctgcaatg tggaaaaact gcagagatac tggctaaact acgaggccca tctgatgaag 240
 gaagggtttga gcgagaagggt gaacacgcct tctctgaagg cttttgtcca gaacctcagc 300
 accaaccactg cagaagactt ctatttctct ctggagccct ctcagggtcc gaggcaggtg 360
 atgaaggagc aggacaagcc cctgacaga gtgcgacttc ccaagagcct ttttcgatcc 420
 ctgcaggcca acagggtctgt ggtccgcttg gcgctacca tcttgacat tggccagggt 480
 actctcttca agggccccgc gctcggcctg ggagatggca gggcgctgtt gaacaatcgc 540
 ctgggtgggtt tgaagtgttg acaaatgcat gtcaccaagc tggctgagcc tctggagatc 600
 ctcttctctc accagcgacc gccccctaac atgaccctca cctgtgtatt ctgggagtgt 660
 actaaaggga ccaactggaga ctggtctctt gagggtctgt ccacggaggt cagacctgag 720
 gggaccgtgt gctgctgtga ccacctgacc tttttcgccc tgcctctgag acccaccttg 780
 gaccagtcga cgggtgcata cctcacacgc atctccagg cgggtctgtg ggtctccatg 840
 atcttctctg ccttcacat tatctttat gcctttctga ggtcttccg ggagaggttc 900
 aagtcagaag atgccccaaa gatccacgtg gccctgggtg gcagcctgtt cctcctgaat 960
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 aagctgagcc tgggtgggtg gggcctgccc gccctgatgg tcacgggca tgggagtgcc 1200
 aacagctacg gccctcacac catcctgtat agggagaacc gcacctctct ggagctatgc 1260
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 ggctctcgca gctcggtggg tgtgacatgg gggttggcca tcttcaecgc gttgggcctc 1500
 tccacgtctc acatctttgc acttttcaac tcttggcaag gtgaggcccc tgcaccagggt 1560
 aggtga

<210> 24
 <211> 521
 <212> PRT
 <213> Homo sapiens

<400> 24
 Met Ala Thr Pro Arg Gly Leu Gly Ala Leu Leu Leu Leu Leu Leu
 1 5 10 15
 Pro Thr Ser Gly Gln Glu Lys Pro Thr Glu Gly Pro Arg Asn Thr Cys
 20 25 30
 Leu Gly Ser Asn Asn Met Tyr Asp Ile Phe Asn Leu Asn Asp Lys Ala
 35 40 45
 Leu Cys Phe Thr Lys Cys Arg Gln Ser Gly Ser Asp Ser Cys Asn Val
 50 55 60
 Glu Asn Leu Gln Arg Tyr Trp Leu Asn Tyr Glu Ala His Leu Met Lys
 65 70 75 80
 Glu Gly Leu Thr Gln Lys Val Asn Thr Pro Phe Leu Lys Ala Leu Val
 85 90 95
 Gln Asn Leu Ser Thr Asn Thr Ala Glu Asp Phe Tyr Phe Ser Leu Glu
 100 105 110
 Pro Ser Gln Val Pro Arg Gln Val Met Lys Asp Glu Asp Lys Pro Pro
 115 120 125
 Asp Arg Val Arg Leu Pro Lys Ser Leu Phe Arg Ser Leu Pro Gly Asn
 130 135 140
 Arg Ser Val Val Arg Leu Ala Val Thr Ile Leu Asp Ile Gly Pro Gly
 145 150 155 160
 Thr Leu Phe Lys Gly Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val
 165 170 175
 Leu Asn Asn Arg Leu Val Gly Leu Ser Val Gly Gln Met His Val Thr
 180 185 190

Lys Leu Ala Glu Pro Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro
 195 200 205
 Pro Asn Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr
 210 215 220
 Thr Gly Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu
 225 230 235 240
 Gly Thr Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu
 245 250 255
 Arg Pro Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser
 260 265 270
 Gln Ala Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile
 275 280 285
 Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
 290 295 300
 Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Phe Leu Leu Asn
 305 310 315 320
 Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala
 325 330 335
 Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
 340 345 350
 Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val
 355 360 365
 Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
 370 375 380
 Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
 385 390 395 400
 Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser
 405 410 415
 Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr
 420 425 430
 Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
 435 440 445
 Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr
 450 455 460
 Ala Val Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu
 465 470 475 480
 Gly Leu Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr
 485 490 495
 Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu
 500 505 510
 Gln Gly Glu Ala Pro Ala Pro Gly Arg
 515 520

<210> 25

<211> 936

<212> DNA

<213> Homo sapiens

<400> 25

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gagggctgct	ccacggaggt	cagacctgag	gggaccgtgt	gctgctgtga	ccacctgacc	120
tttttcgcc	tgctcctgag	accacacctg	gaccagtcca	cggtgcata	cctcacacgc	180
atcctccagg	cgggctgtgg	ggtctccatg	atcttcctgg	ccttcaccaa	tattctttat	240
gcctttctga	ggctttcccg	ggagaggttc	aagtcagaag	atgccccaaa	gatccacgtg	300
gccctgggtg	gcagctgttt	cctcctgaat	ctggccttct	tggtcaatgt	ggggagtggc	360
tcaagggggt	ctgatgctgc	ctgctggggc	cgggggggctg	tcttccaacta	cttcctgctc	420

tgtgccttca	cctggatggg	ccttgaagcc	ttccacctct	acctgctgcg	tgtaggggtc	480
ttcaacacct	acttcgggca	ctacttccgt	aagctgagcc	tggtggggctg	gggcctgccc	540
gcctgtatgg	tcacgggcac	tgggagtgcc	aacagctacg	gcctctacac	catccgtgat	600
agggagaacc	gcacctctct	ggagctatgc	tggttccgtg	aagggacaac	catgtacgcc	660
ctctatatca	ccgtccacgg	ctacttcctc	atcaccttcc	tcttttggcat	gggtggtcctg	720
gccttggtgg	tctggaagat	cttcacccgt	tcccggtgta	cagcggtcaa	ggagcggtggg	780
aagaacccga	agaaggtgct	cacctctgct	ggcctctcga	gccttggtggg	tgtagacatgg	840
gggttgccca	tcttcacccc	gttgggcctc	tcacccgtct	acatctttgc	acttttcaac	900
tcttgcaag	gtgagggccc	tgaccagggt	aggtga			936

<210> 26
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 26

Met	Thr	Leu	Thr	Cys	Val	Phe	Trp	Asp	Val	Thr	Lys	Gly	Thr	Thr	Gly
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Asp	Trp	Ser	Ser	Glu	Gly	Cys	Ser	Thr	Glu	Val	Arg	Pro	Glu	Gly	Thr
			20					25					30		
Val	Cys	Cys	Cys	Asp	His	Leu	Thr	Phe	Phe	Ala	Leu	Leu	Leu	Arg	Pro
			35				40					45			
Thr	Leu	Asp	Gln	Ser	Thr	Val	His	Ile	Leu	Thr	Arg	Ile	Ser	Gln	Ala
			50				55				60				
Gly	Cys	Gly	Val	Ser	Met	Ile	Phe	Leu	Ala	Phe	Thr	Ile	Ile	Leu	Tyr
			65			70				75				80	
Ala	Phe	Leu	Arg	Leu	Ser	Arg	Glu	Arg	Phe	Lys	Ser	Glu	Asp	Ala	Pro
			85					90					95		
Lys	Ile	His	Val	Ala	Leu	Gly	Gly	Ser	Leu	Phe	Leu	Leu	Asn	Leu	Ala
			100					105					110		
Phe	Leu	Val	Asn	Val	Gly	Ser	Gly	Ser	Lys	Gly	Ser	Asp	Ala	Ala	Cys
			115				120					125			
Trp	Ala	Arg	Gly	Ala	Val	Phe	His	Tyr	Phe	Leu	Leu	Cys	Ala	Phe	Thr
			130				135					140			
Trp	Met	Gly	Leu	Glu	Ala	Phe	His	Leu	Tyr	Leu	Leu	Ala	Val	Arg	Val
			145				150				155			160	
Phe	Asn	Thr	Tyr	Phe	Gly	His	Tyr	Phe	Leu	Lys	Leu	Ser	Leu	Val	Gly
			165					170					175		
Trp	Gly	Leu	Pro	Ala	Leu	Met	Val	Ile	Gly	Thr	Gly	Ser	Ala	Asn	Ser
			180					185					190		
Tyr	Gly	Leu	Tyr	Thr	Ile	Arg	Asp	Arg	Glu	Asn	Arg	Thr	Ser	Leu	Glu
			195				200					205			
Leu	Cys	Trp	Phe	Arg	Glu	Gly	Thr	Thr	Met	Tyr	Ala	Leu	Tyr	Ile	Thr
			210				215				220				
Val	His	Gly	Tyr	Phe	Leu	Ile	Thr	Phe	Leu	Phe	Gly	Met	Val	Val	Leu
			225				230				235			240	
Ala	Leu	Val	Val	Trp	Lys	Ile	Phe	Thr	Leu	Ser	Arg	Ala	Thr	Ala	Val
			245					250					255		
Lys	Glu	Arg	Gly	Lys	Asn	Arg	Lys	Lys	Val	Leu	Thr	Leu	Leu	Gly	Leu
			260					265					270		
Ser	Ser	Leu	Val	Gly	Val	Thr	Trp	Gly	Leu	Ala	Ile	Phe	Thr	Pro	Leu
			275				280						285		
Gly	Leu	Ser	Thr	Val	Tyr	Ile	Phe	Ala	Leu	Phe	Asn	Ser	Leu	Gln	Gly
			290				295					300			
Glu	Ala	Pro	Ala	Pro	Gly	Arg									
			305				310								

<210> 27
 <211> 1119
 <212> DNA
 <213> Homo sapiens

<400> 27
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 catgtcacca agctggctga gctctgggag atcgtctctc ctcaccagcg accgccccct 180
 aacatgacc tcacctgtgt attctgggat gtgactaaag ggaccactgg agactgggtct 240
 tctgagggct gctccacgga ggctagacct gaggggaccg tgtgctgctg tgaccacctg 300
 acctttttcg cctctgtcct gagaccacc ttggaccagt ccacggtgca tatcttcaca 360
 cgcatctccc aggcgggctg tggggtctcc atgatcttc tggccttcac cattattctt 420
 tatgccttcc tgaggcttcc ccgggagagg ttcaagtcag aagatgcccc aaagatccac 480
 gtggccctgg gtggcagcct gtctctcctg aatctggcct tcttggtcaa tgtggggagt 540
 ggctcaaaag ggtctatgct gcctgtctgg gcccgggggg ctgtcttcca ctacttctctg 600
 ctctgtgcct tcacctggat gggccttgaa gcttccacc tctacctgct cgctgtcagg 660
 gtcttcaaca cctacttcgg gcactacttc ctgaagctga gcttggtggg ctggggcctg 720
 ccgcctctga tggctatcgg cactgggagt gccaacagct acggcctcta caccatccgt 780
 gatagggaga accgcacctc tctggagcta tctggtgtcc gtgaagggac aaccatgtac 840
 gcctctata tcaccgtcca cggtacttcc ctcatcactc tctcttttgg caagggtggct 900
 ctggccctgg tggctctggaa gatcttcacc ctgctccctg ctacagcggt caaggagcgg 960
 ggggaagaacc ggaagaaggt gctcacctg ctgggcctct cgagcctggg ggggtgtgaca 1020
 tggggggttg ccatcttcac ccctgtgggc ctctccaccg tctacatctt tgcacttttc 1080
 aactccttgc aagggtgagcc ccttcgacca gggaggtga 1119

<210> 28
 <211> 372
 <212> PRT
 <213> Homo sapiens

<400> 28
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 Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val Leu Asn Asn Arg Leu
 20 25 30
 Val Gly Leu Ser Val Gly Gln Met His Val Thr Lys Leu Ala Glu Pro
 35 40 45
 Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
 50 55 60
 Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly Asp Trp Ser
 65 70 75 80
 Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr Val Cys Cys
 85 90 95
 Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro Thr Leu Asp
 100 105 110
 Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
 115 120 125
 Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr Ala Phe Leu
 130 135 140
 Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
 145 150 155 160
 Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe Leu Val
 165 170 175
 Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
 180 185 190

Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
 195 200 205
 Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
 210 215 220
 Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
 225 230 235 240
 Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
 245 250 255
 Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
 260 265 270
 Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
 275 280 285
 Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
 290 295 300
 Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
 305 310 315 320
 Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu
 325 330 335
 Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser
 340 345 350
 Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly Glu Ala Pro
 355 360 365
 Ala Pro Gly Arg
 370

<210> 29

<211> 741

<212> DNA

<213> Homo sapiens

<400> 29

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tcccgggaga	ggttcaagtc	agaagatgcc	ccaaagatcc	acgtggccct	gggtggcagc	120
ctgttctccc	tgaatctggc	cttcttggtc	aatgtgggga	gtgggtcaaa	ggggtctgat	180
gctgcctgct	gggcccgggg	ggctgtcttc	cactacttcc	tgctctgtgc	cttcacctgg	240
atgggacctg	aagccctcca	cctctacctg	ctcgtctgca	gggtcttcaa	cacctacttc	300
gggcactact	tctgaagct	gagcctgggt	ggctggggcc	tgccccccct	gatgtcatc	360
ggcactggga	gtgccaacag	ctacggcctc	tacaccatcc	gtgataggga	gaaccgcacc	420
tctctggagc	tatgtcgtgt	ccgtgaagg	acaaccatgt	acgccctcta	tatcacgcgc	480
cacggctact	tctcatcac	cttctctttt	ggcatgggtg	tctggccct	gggtgctctg	540
aagatcttca	ccctgtccc	tgctacagcg	gtcaaggagc	gggggaagaa	ccggaagaag	600
gtgctacccc	tgctgggctt	ctcagcctg	gtgggtgtga	catgggggtt	ggccatcttc	660
accccgctgg	gcctctccac	cgtctacatc	tttgcacttt	tcaactcctt	gcaaggtgag	720
gccccgcac	caggagagtg	a				741

<210> 30

<211> 246

<212> PRT

<213> Homo sapiens

<400> 30

Met Gly Ala Pro His Gly Ser Cys Gly Pro Leu Gly Pro Leu Ile Ser	
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His Pro Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys	
20 25 30	
Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe	

35 40 45
 Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
 50 55 60
 Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
 65 70 75 80
 Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
 85 90 95
 Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
 100 105 110
 Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
 115 120 125
 Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
 130 135 140
 Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
 145 150 155 160
 His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
 165 170 175
 Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
 180 185 190
 Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser
 195 200 205
 Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly
 210 215 220
 Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly Glu
 225 230 235 240
 Ala Pro Ala Pro Gly Arg
 245

<210> 31
 <211> 528
 <212> DNA
 <213> Homo sapiens

<400> 31
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 ggcacacctca cagacagaaa agctcagcca ggggacttcc tgggtttgtc ggcagaggt 180
 accactccca gtcgccaccac agctgcccc tctccagat gctggttccg tgaagggaca 240
 accatgtacg cctctctatat caccgtccac ggctacttcc tcatcacctt cctctttggc 300
 atggtgggtcc tggccctgggt ggtctggaag atcttcaccc tgtcccggtc tacagcggtc 360
 aaggagcggg ggaagaaccg gaagaaggtg ctcacctgctc tgggctctc gagcctgggt 420
 ggtgtgacat gggggttggc catcttcacc cgttggggcc tctccaccgt ctacatcttt 480
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<210> 32
 <211> 175
 <212> PRT
 <213> Homo sapiens

<400> 32
 Met Gly Gln Met Lys His Val Phe Glu Val Thr Leu Ala Leu Lys Arg
 1 5 10 15
 His Gln Thr Gly Ala Arg Trp Arg Pro Leu Pro Gln Arg Glu Ser Gln
 20 25 30
 Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
 35 40 45

Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
 50 55 60
 Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
 65 70 75 80
 Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
 85 90 95
 Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
 100 105 110
 Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Lys
 115 120 125
 Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu Val Gly Val Thr Trp
 130 135 140
 Gly Leu Ala Ile Phe Thr Thr Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe
 145 150 155 160
 Ala Leu Phe Asn Ser Leu Gln Gly Glu Ala Pro Ala Pro Gly Arg
 165 170 175

<210> 33

<211> 1458

<212> DNA

<213> Homo sapiens

<400> 33

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atcttcaact	tgaatgacaa	ggctttgtgc	ttcaccgaat	gcaggcagtc	gggcagcgac	180
ctctgcaatg	tggaaaactt	gcagagatac	tggtctaaact	acgaggccca	tctgatgaag	240
gaagggttga	cgcagaaggt	gaacacgcct	ttcctgaagg	cttttggtcca	gaacctcagc	300
accaacactg	cagaagactt	ctattttctt	ctggagccct	ctcaggttcc	gaggcaggtg	360
atgaaggagc	aggacaagcc	ccctgacaga	gtgcgacttc	ccaagagcat	ttttcgatcc	420
ctgccaggca	acaggtctgt	ggtccgcttg	gccgtcaaca	ttctggacat	tggtccagggt	480
actctcttca	agggcccccg	gctcggcctg	ggagatggca	gcggcggtgt	gaacaatcgc	540
ctgggtgggtt	tgagtggtgg	acaaatgcac	gtcaccgaac	tggtcagacc	tctggagatc	600
gtctttcttc	accagcgacc	gcccccctaac	atgacctca	cctgtgtatt	ctgggatgtg	660
actaaaagga	ccactggaga	ctggtcttct	gagggtctgt	ccacggaggt	cagacctgag	720
gggacagtgt	gctgctgtga	ccaactgaac	tttttcgccc	tgctctctgag	accacacttg	780
gaccagtcca	cggtgcatac	cctcacacgc	atctccagg	cgggctgtgg	ggttccatg	840
atcttctctg	ccttcaccat	tattctttat	gcctttctga	ggctttcccg	ggagaggttc	900
aagtccagaag	atgccccaaa	gattccacgt	gcctgggtg	gcagcctgtt	ctctctgaat	960
ctggccttct	tggtcactgt	ggggagtggc	tcaaagggtt	ctgatctgc	ctgctgggcc	1020
cggggggctg	tcttccactc	cttctgctc	tggtccttca	cctggatggg	ccttgaagcc	1080
ctccactctc	acctgctcgc	tgtaagggtc	ttcaacacct	actctcggtca	ctacttctct	1140
aagctgagcc	tggttggtctg	gggcctgccc	gccctgatgg	tcactcgacac	tgggagtgtc	1200
aacagctcag	gcctctacac	catccgtgat	agggagaaac	gcacctctct	ggagctatgc	1260
tggttccgtg	aaggggacaac	catgtacgcc	ctctatatca	ccgtccacgg	ctacttcttc	1320
atcacctctc	tctttggcat	ggttggtctg	gccctggtgg	tctggaaagt	cttcacacctg	1380
tccctgtcta	cagcgtgcaa	ggagcggggg	aagaacccgt	gctcacacctg	ctgggacctct	1440
cgagcctggt	gggtgtga					1458

<210> 34

<211> 485

<212> PRT

<213> Homo sapiens

<400> 34

Met Ala Thr Pro Arg Gly Leu Gly Ala Leu Leu Leu Leu Leu Leu

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Pro	Thr	Ser	Gly	Gln	Glu	Lys	Pro	Thr	Glu	Gly	Pro	Arg	Asn	Thr	Cys
			20							25			30		
Leu	Gly	Ser	Asn	Asn	Met	Tyr	Asp	Ile	Phe	Asn	Leu	Asn	Asp	Lys	Ala
		35					40				45				
Leu	Cys	Phe	Thr	Lys	Cys	Arg	Gln	Ser	Gly	Ser	Asp	Ser	Cys	Asn	Val
		50				55				60					
Glu	Asn	Leu	Gln	Arg	Tyr	Trp	Leu	Asn	Tyr	Glu	Ala	His	Leu	Met	Lys
		65			70					75				80	
Glu	Gly	Leu	Thr	Gln	Lys	Val	Asn	Thr	Pro	Phe	Leu	Lys	Ala	Leu	Val
			85						90					95	
Gln	Asn	Leu	Ser	Thr	Asn	Thr	Ala	Glu	Asp	Phe	Tyr	Phe	Ser	Leu	Glu
			100						105					110	
Pro	Ser	Gln	Val	Pro	Arg	Gln	Val	Met	Lys	Asp	Glu	Asp	Lys	Pro	Pro
		115				120				125					
Asp	Arg	Val	Arg	Leu	Pro	Lys	Ser	Leu	Phe	Arg	Ser	Leu	Pro	Gly	Asn
		130				135				140					
Arg	Ser	Val	Val	Arg	Leu	Ala	Val	Thr	Ile	Leu	Asp	Ile	Gly	Pro	Gly
		145			150					155				160	
Thr	Leu	Phe	Lys	Gly	Pro	Arg	Leu	Gly	Leu	Gly	Asp	Gly	Ser	Gly	Val
			165						170					175	
Leu	Asn	Asn	Arg	Leu	Val	Gly	Leu	Ser	Val	Gly	Gln	Met	His	Val	Thr
			180						185					190	
Lys	Leu	Ala	Glu	Pro	Leu	Glu	Ile	Val	Phe	Ser	His	Gln	Arg	Pro	Pro
		195				200					205				
Pro	Asn	Met	Thr	Leu	Thr	Cys	Val	Phe	Trp	Asp	Val	Thr	Lys	Gly	Thr
		210				215				220					
Thr	Gly	Asp	Trp	Ser	Ser	Glu	Gly	Cys	Ser	Thr	Glu	Val	Arg	Pro	Glu
		225			230					235				240	
Gly	Thr	Val	Cys	Cys	Cys	Asp	His	Leu	Thr	Phe	Phe	Ala	Leu	Leu	Leu
			245						250					255	
Arg	Pro	Thr	Leu	Asp	Gln	Ser	Thr	Val	His	Ile	Leu	Thr	Arg	Ile	Ser
			260						265					270	
Gln	Ala	Gly	Cys	Gly	Val	Ser	Met	Ile	Phe	Leu	Ala	Phe	Thr	Ile	Ile
		275					280							285	
Leu	Tyr	Ala	Phe	Leu	Arg	Leu	Ser	Arg	Glu	Arg	Phe	Lys	Ser	Glu	Asp
		290				295				300					
Ala	Pro	Lys	Ile	His	Val	Ala	Leu	Gly	Gly	Ser	Leu	Phe	Leu	Leu	Asn
		305			310					315				320	
Leu	Ala	Phe	Leu	Val	Asn	Val	Gly	Ser	Gly	Ser	Lys	Gly	Ser	Asp	Ala
			325						330					335	
Ala	Cys	Trp	Ala	Arg	Gly	Ala	Val	Phe	His	Tyr	Phe	Leu	Leu	Cys	Ala
		340							345					350	
Phe	Thr	Trp	Met	Gly	Leu	Glu	Ala	Phe	His	Leu	Tyr	Leu	Leu	Ala	Val
		355				360								365	
Arg	Val	Phe	Asn	Thr	Tyr	Phe	Gly	His	Tyr	Phe	Leu	Lys	Leu	Ser	Leu
		370				375				380					
Val	Gly	Trp	Gly	Leu	Pro	Ala	Leu	Met	Val	Ile	Gly	Thr	Gly	Ser	Ala
		385			390					395				400	
Asn	Ser	Tyr	Gly	Leu	Tyr	Thr	Ile	Arg	Asp	Arg	Glu	Asn	Arg	Thr	Ser
			405						410					415	
Leu	Glu	Leu	Cys	Trp	Phe	Arg	Glu	Gly	Thr	Thr	Met	Tyr	Ala	Leu	Tyr
		420							425					430	
Ile	Thr	Val	His	Gly	Tyr	Phe	Leu	Ile	Thr	Phe	Leu	Phe	Gly	Met	Val
		435				440								445	
Val	Leu	Ala	Leu	Val	Val	Trp	Lys	Ile	Phe	Thr	Leu	Ser	Arg	Ala	Thr

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450 455 460
Ala Val Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser
465 470 475 480
Arg Ala Trp Trp Val
485

<210> 35
<211> 828
<212> DNA
<213> Homo sapiens

<400> 35
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tttttcgccc tgctcctgag accacccttg gaccagtcca cggtgcatat cctcacacgc 180
atctcccagg cgggctgtgg ggtctccatg atcttctctg ccttcacat tatttcttat 240
gcctttctga ggctttcccg ggagaggttc aagtcagaag atgccccaaa gatccacgtg 300
gccctgggtg gcagcctgtt ctctctgaat ctggccttct tggctcaatgt ggggagtggc 360
tcaaaaggggt ctgatctgc ctgctgggcc cggggggctg tcttccacta ctctcctc 420
tgtgccttca cctggatggg ccttgaagcc ttccacctct acctgctcgc tgtcagggtc 480
ttcaacacct acttcgggca ctacttctgt aagctgagcc tgggtgggctg gggcctgcgc 540
gcctgatgag tcatcggcac tgggagtggc aacagctacg gcctctcacac catccgtgat 600
agggagaaacc gcacctctct ggagctatgc tgggtccgtg aagggacaac catgtacgcc 660
ctctatatca ccgtccacgg ctacttctct atcaccttcc tctttggcat ggtgtgctg 720
gcctgtgtgg tctgggaagt ctccacctg tcccgctgca cagcggtcaa ggagcggggg 780
aagaaccggt gctcaccctg ctgggcctct cgagcctggt ggggtgtga 828

<210> 36
<211> 275
<212> PRT
<213> Homo sapiens

<400> 36
Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly
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Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr
20 25 30
Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro
35 40 45
Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
50 55 60
Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
65 70 75 80
Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
85 90 95
Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
100 105 110
Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
115 120 125
Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
130 135 140
Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
145 150 155 160
Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
165 170 175
Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser

180 185 190
Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu
195 200 205
Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr
210 215 220
Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
225 230 235 240
Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val
245 250 255
Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala
260 265 270
Trp Trp Val
275

<210> 37
<211> 1011
<212> DNA
<213> Homo sapiens

<400> 37
atggccccctt ctgcagcctg gctccccga tctccccctt cacaggggccc cgggctcggc 60
ctggggagatg gcagcggcgt gttgaacaat cgctcgttg gtttgagtgt gggacaaatg 120
catgtcacca agctggctga gctctggag atcgtcttct ctaccacgg accgccccct 180
aacatgacc tcacctgtgt attctgggat gtgactaaag ggaccactgg agactggtct 240
ctctgaggctt gctccacgga ggctcagacct gaggggaccg tgtgctcgtg tgaccactgt 300
acctttttct cctcgtcctt gagaccacac ttggaccagt ccacgggtgca tatcttcaca 360
cgcattctccc aggcgggctg tggggtcttc atgatcttcc tggccttcac cattattctt 420
tatgcctttc tgaggctttc cggggagagg ttcaagtcag aagatgcccc aaagatccac 480
gtggccctgg gtggcagcct gttctctcgt aatctggcct tcttggtcaa tgtggggagt 540
ggctcaaaagg ggtctgatgc tgccctgctg gcccgggggg ctgtcttcca ctacttctg 600
ctctgtgctt tcacctggat gggccttgaa gccttccacc ttacctgct cgtgtcagg 660
gtcttcaaca cctacttcgg gcaactcttc ctgaagctga gcctgggtggg ctggggcctg 720
cccgcctga ttgtcatcgg cactgggagt gccaacagct acggcctcta caccatcgt 780
gatagggaga accgcacctc tctggagcta tgctgggttc gtgaagggac aaccatgtac 840
gccctctata tcacctcca cggtacttct ctcatacct tctcttttg catgggtggc 900
ctggccctgg ttgtctggaa gatcttcacc ctgtccctgt ctacagcgt caaggagcgg 960
gggaagaacc ggtgctcacc ctgctgggct tctcgagcct ggtgggtgtg a 1011

<210> 38
<211> 336
<212> PRT
<213> Homo sapiens

<400> 38
Met Ala Pro Ser Ala Ala Trp Pro Pro Arg Ser Pro Leu Ser Gln Gly
1 5 10 15
Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val Leu Asn Asn Arg Leu
20 25 30
Val Gly Leu Ser Val Gly Gln Met His Val Thr Lys Leu Ala Glu Pro
35 40 45
Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
50 55 60
Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly Asp Trp Ser
65 70 75 80
Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr Val Cys Cys
85 90 95

Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro Thr Leu Asp
 100 105 110
 Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
 115 120 125
 Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr Ala Phe Leu
 130 135 140
 Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
 145 150 155 160
 Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe Leu Val
 165 170 175
 Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
 180 185 190
 Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
 195 200 205
 Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
 210 215 220
 Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
 225 230 235 240
 Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
 245 250 255
 Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
 260 265 270
 Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
 275 280 285
 Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
 290 295 300
 Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
 305 310 315 320
 Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Trp Trp Val
 325 330 335

<210> 39
 <211> 633
 <212> DNA
 <213> Homo sapiens

<400> 39
 atggggagctc cccatgggag ctgtggcccc ttggggcctc ttattttctca cccaggcgtt 60
 tcccggaaga ggttcaagtc agaagatgcc ccaaatgcc acgtggccct ggggtggcagc 120
 ctgttctctcc tgaatctggc cttcttggtc aatgtgggga gtggctcaaa ggggtctgat 180
 ctgctcctgct gggcccgggg ggcgtgtcttc cactacttcc tgctctgtgc ctccacctgg 240
 atggggccttg aagccttcca cctctacctg ctgcgtgtca gggctctcaa cactacttc 300
 gggcactact tcttgaagct gaggctgggt ggcctggggcc tgcccgccct gatggtcate 360
 ggcactggga gtgccaacag ctacggcctc tacaccatcc gtgataggga gaaccgcacc 420
 tctctggagc tatgtgtggt ccgtaaggg acaaccatgt acgccccteta tatcacgctc 480
 cagggctact tctctatcac ctctctcttt ggcattggtg tcttggccct ggtgtctgtg 540
 aagatcttca cctgtctccg tgctacagcg gtcaaggagc ggggggaaga cgggtgctca 600
 cctctgctggg cctctcgagc ctgggtgggtg tga 633

<210> 40
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 40
 Met Gly Ala Pro His Gly Ser Cys Gly Pro Leu Gly Pro Leu Ile Ser

1 5 10 15
 His Pro Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys
 20 25 30
 Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe
 35 40 45
 Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
 50 55 60
 Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
 65 70 75 80
 Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
 85 90 95
 Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
 100 105 110
 Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
 115 120 125
 Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
 130 135 140
 Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
 145 150 155 160
 His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
 165 170 175
 Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
 180 185 190
 Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Trp
 195 200 205
 Trp Val
 210

<210> 41

<211> 420

<212> DNA

<213> Homo sapiens

<400> 41

atggggc	aaaa	tga	aa	cat	gt	cttt	gag	gtc	act	ttg	gcat	taa	aga	gaca	cc	gact	gga	60
gccaggt	ggc	ccct	cccc	ac	agc	ggg	gag	agc	cag	ggat	tga	tgg	gtg	gg	aa	tggg	gaga	120
ggcacct	tca	cag	acag	aaa	ag	ctc	ag	cca	ggg	ga	cttc	tgg	gtt	gtc	ggc	cag	aggt	180
accact	ccca	gt	cccc	ac	ag	ct	cccc	tc	ctc	ag	aat	gct	ggt	tc	gga	ggg	gaca	240
accatg	tacg	cc	ctc	tata	t	cac	gt	ccac	gg	ct	a	ctt	ac	ctt	tc	gtg	gc	300
atggt	gtgt	tc	tg	ccct	ggt	ggt	ctg	ga	ag	at	cttc	ac	cc	gt	gc	tac	agc	360
aaggag	cggg	gga	aga	ac	cg	gt	gtc	ac	cc	tg	ctg	ggg	cc	ct	g	gtg	gtg	420

<210> 42

<211> 139

<212> PRT

<213> Homo sapiens

<400> 42

Met Gly Gln Met Lys His Val Phe Glu Val Thr Leu Ala Leu Lys Arg	
1 5 10 15	
His Gln Thr Gly Ala Arg Trp Arg Pro Leu Pro Gln Arg Glu Ser Gln	
20 25 30	
Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala	
35 40 45	
Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser	
50 55 60	

Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
 65 70 75 80
 Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
 85 90 95
 Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
 100 105 110
 Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Cys
 115 120 125
 Ser Pro Cys Trp Ala Ser Arg Ala Trp Trp Val
 130 135

<210> 43
 <211> 1650
 <212> DNA
 <213> Homo sapiens

<400> 43
 atggcgacgc ccaggggcct gggggccctg ctctgctcc tctgctccc gacctcaggt 60
 caggaaagac ccaccgaagg gccaaagaac acctgctgg ggagcaacaa catgtacgac 120
 atcttcaact tgaatgacaa gcctttgtgc ttacccaagt gcaggcagtc gggcagcgac 180
 tcttcgaatg tggaaaaact gcagagatac tggctaaact acgaggccca tctgatgaag 240
 gaagggttga cgcagaagggt gaacacgcct ttctgaagg ctttgggtcca gaacctcage 300
 accaacaact cagaagactt ctatttctct ctggagccct ctacaggttc gaggcaggtg 360
 ataaggagcg aggacaagcc cctcgacaga gtgcgacttc ccaagagcct ttttcgatcc 420
 ctgccaggca acaggtctgt ggctcgcttg gcggtcacca ttctggacat ttgtccaggg 480
 actctcttca agggcccccg ctccggcctg ggagatggca gggcgctgtt gaacaatcgc 540
 ctggttgggtt tgagtgtggg acaaatgcac gtacccaagg tggctgagcc tctggagatc 600
 gtcttctctc accagcgacc gcccccctaac atgacctca cctgtgtatt ctgggatgtg 660
 actaaaggga ccaactggaga ctgggtctctt gagggctgct ccaaggaggt cagacctgag 720
 gggacgctgt gctgctgtga ccaactgacc tttttcgccc tgctcctgag aacctcctg 780
 gaccagtcca cgtgtcatat cctcacacgc atctccagg cggtctgtgg ggtctccatg 840
 atcttctcga ccttcacat tattctttat gcctttctga ggctttcccg ggagaggttc 900
 aagtccagaag atgccccaaa gatccacgtg gccctgggtg gcagcctgtt cctcctgaat 960
 ctggccctct tgggtcaatgt ggggagtggc tcaaagggtg ctgatgtgc ctgctggggc 1020
 cggggggctg tcttccacta ctctctgctc tgtgccttca cctggatggg ccttgaagcc 1080
 ttccacctct acctgctcgc tgtcagggtc ttcaacacct acttcgggca ctacttctgt 1140
 aagctgagcc tgggtgggtg gggcctgccc gccctgatgg tcatcgggac tgggagtgcc 1200
 aacagctacg gcctctacac catccgtgat agggagaacc gcacctctct ggagctatgc 1260
 tggttccgtg aaggggacaac catgtacgcc ctctatatca ccgtccacgg ctactctctc 1320
 atcaccttcc tctttggcat ggtgtgtcct gccctgggtg tctggaagat cttcacctctg 1380
 tccgtgtcta cagcgggtcaa ggagcggggg aagaaccgga agaaggtgct caccctgctg 1440
 ggctcttcga gcttggtggg tgtgacatgg gggttggcca tcttcacccc gttgggctc 1500
 tccacgtctt acatctttgc acttttcaac tcttgcgaag gtgtcttcat ctgctgctgg 1560
 ttaccatccc ttacctccc aagtcagagc accacagtc cctcctctac tgcaagattg 1620
 gaccaggccc actccgcac tcaagaatag 1650

<210> 44
 <211> 549
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Ala Thr Pro Arg Gly Leu Gly Ala Leu Leu Leu Leu Leu Leu
 1 5 10 15
 Pro Thr Ser Gly Gln Glu Lys Pro Thr Glu Gly Pro Arg Asn Thr Cys
 20 25 30

Leu Gly Ser Asn Asn Met Tyr Asp Ile Phe Asn Leu Asn Asp Lys Ala
 35 40 45
 Leu Cys Phe Thr Lys Cys Arg Gln Ser Gly Ser Asp Ser Cys Asn Val
 50 55 60
 Glu Asn Leu Gln Arg Tyr Trp Leu Asn Tyr Glu Ala His Leu Met Lys
 65 70 75 80
 Glu Gly Leu Thr Gln Lys Val Asn Thr Pro Phe Leu Lys Ala Leu Val
 85 90 95
 Gln Asn Leu Ser Thr Asn Thr Ala Glu Asp Phe Tyr Phe Ser Leu Glu
 100 105 110
 Pro Ser Gln Val Pro Arg Gln Val Met Lys Asp Glu Asp Lys Pro Pro
 115 120 125
 Asp Arg Val Arg Leu Pro Lys Ser Leu Phe Arg Ser Leu Pro Gly Asn
 130 135 140
 Arg Ser Val Val Arg Leu Ala Val Thr Ile Leu Asp Ile Gly Pro Gly
 145 150 155 160
 Thr Leu Phe Lys Gly Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val
 165 170 175
 Leu Asn Asn Arg Leu Val Gly Leu Ser Val Gly Gln Met His Val Thr
 180 185 190
 Lys Leu Ala Glu Pro Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro
 195 200 205
 Pro Asn Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr
 210 215 220
 Thr Gly Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu
 225 230 235 240
 Gly Thr Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu
 245 250 255
 Arg Pro Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser
 260 265 270
 Gln Ala Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile
 275 280 285
 Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
 290 295 300
 Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn
 305 310 315 320
 Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala
 325 330 335
 Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
 340 345 350
 Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val
 355 360 365
 Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
 370 375 380
 Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
 385 390 395 400
 Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Glu Asn Arg Thr Ser
 405 410 415
 Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr
 420 425 430
 Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
 435 440 445
 Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr
 450 455 460
 Ala Val Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu
 465 470 475 480

Gly Leu Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr
 485 490 495
 Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu
 500 505 510
 Gln Gly Val Phe Ile Cys Cys Trp Phe Thr Ile Leu Tyr Leu Pro Ser
 515 520 525
 Gln Ser Thr Thr Val Ser Ser Ser Thr Ala Arg Leu Asp Gln Ala His
 530 535 540
 Ser Ala Ser Gln Glu
 545

<210> 45
 <211> 1020
 <212> DNA
 <213> Homo sapiens

<400> 45
 atgacctca cctgtgtatt ctgggatgtg actaaaggga ccactggaga ctggtcttct 60
 gagggctgct ccacggagggt cagacctgag gggacctgtg gctgctgtga ccacctgaac 120
 tttttcgccc tgctctctgag accacacctg gaccagtcca cgggtgcata cctcacacgc 180
 atctccacgg cgggctgtgg ggtctccatg atcttctctg ccttcaccat tattctttat 240
 gccctttctga ggctttcccg ggagagggtc aagtcagaa atgccccaaa gatccacgtg 300
 ggggggggtg gcagcctgtt cctcctgaat ctggccttct tgggtcaatg ggggagtggc 360
 tcaaaaggggt ctgatgtgc ctgctggggc cgggggggtg tcttcacata ctctcgtctc 420
 tgtgccttca cctggatggg ccttgaagcc ttccacctct acctgctcgc tgtcagggtc 480
 ttcaacacct acttcgggca ctacttctgt aagctgagcc tgggtgggtg gggcctgccc 540
 gccctgatgg tcatcggcac tgggagtggc aacagctacg gcctctacac catccgtgat 600
 agggagaaac gcacctctct ggagctatgc tggttccgtg aaggggacaac catgtacgcc 660
 ctctatatca ccgtccacgg ctacttctct atcacccttc tctttggcat ggtggtctgt 720
 gccctgggtg tctggaaagt ctccacctg tcccggtcta cagcggtcac ggagcggggg 780
 aagaacccga agaaggtgct caccctgctg ggcctctcga gcctgggtgg tgtgacatgg 840
 ggggttgcca tcttcacccc gttggggctc tccacctgtc acatctttgc acttttcaac 900
 tcttgcaag gtgtcttcat ctgctgctgg ttaccatcc tttacctccc aagtacagag 960
 accacagtct cctcctctac tgcaagattg gaccaggccc actccgcac tcaagaatag 1020

<210> 46
 <211> 339
 <212> PRT
 <213> Homo sapiens

<400> 46
 Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly
 1 5 10 15
 Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr
 20 25 30
 Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro
 35 40 45
 Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
 50 55 60
 Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
 65 70 75 80
 Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
 85 90 95
 Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
 100 105 110
 Phe Leu Val Asn Val Gly Ser Lys Gly Ser Asp Ala Ala Cys

115 120 125
 Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
 130 135 140
 Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
 145 150 155 160
 Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
 165 170 175
 Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser
 180 185 190
 Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu
 195 200 205
 Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr
 210 215 220
 Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
 225 230 235 240
 Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val
 245 250 255
 Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu
 260 265 270
 Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu
 275 280 285
 Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly
 290 295 300
 Val Phe Ile Cys Cys Trp Phe Thr Ile Leu Tyr Leu Pro Ser Gln Ser
 305 310 315 320
 Thr Thr Val Ser Ser Ser Thr Ala Arg Leu Asp Gln Ala His Ser Ala
 325 330 335
 Ser Gln Glu

<210> 47

<211> 1203

<212> DNA

<213> Homo sapiens

<400> 47

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 ctggggagatg gcagcggcggt gttgaacaat cgcctgggtgg gtttgagtgt gggacaaaatg 120
 catgtcacca agctgctctga gccctctggag atcgtctctct ctaccacagcg accgcgccctt 180
 aacatgacctt tcacctgtgt attctgggat gtgactaaag ggaccactgg agactgggtct 240
 ctgaggggct gctccacgga ggtcagacct gagggggaccg tgtgctgctgt tgaccacctg 300
 accttttttc cctgtctctct gagacccacc ttggaccagt ccacggtgca tatctcaca 360
 cgcactctccc aggcgggctgt tgggggtctcc atgatcttcc tggccttcac cattattctt 420
 tatgccttct tagagctttc ccgggagagg ttcaagtcaag aagatgcccc aaagatccac 480
 gtggccctctg gtggcagcctt gttctctctg aatctggcct tcttggtcaa tgtggggagt 540
 ggctcaaaagg ggtctgatgc tgctctgtgg gcccgggggg ctgtctctcca ctacttctgt 600
 ctctgtgcct tcacctggat gggccttgaa gccctccacc tctacctgtc cgtgtctcagg 660
 tcttccaaca cctacttcgg gcaactattc ctgaagctga gccctgggtgg ctggggcgctg 720
 ccgcacctga tggtcacgtg cactgggagt gcccaacagct acggcctctca caccatcgt 780
 gatagggaga accgcacctc tctggagcta tgcgtgttcc gtgaagggac aaccatgtac 840
 gccctctata tcaccgtcca cggctacttc ctcatcacct tcctctttgg catgttggtc 900
 ttggcccttg ttggtctggaa gatcttcacc ctgtcccgtg ctacagcggt caaggagcgg 960
 ggggaagaac ggaagaaggt gctcaccctg ctggggcctct cgagccttgt ggtgtgtaca 1020
 tgggggttgc catctttcac ccggttgggc tctccaccg tctacatctt tgcacttttc 1080
 aactctctgc aaggtgtctt catctgtctg tgggttacc tctttacct cccaagtacg 1140
 agcaccacag tctctctctc tactgcaaga ttggaccagg cccactccgc atctcaagaa 1200

tag

1203

<210> 48
 <211> 400
 <212> PRT
 <213> Homo sapiens

<400> 48

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Met Ala Pro Ser Ala Ala Trp Pro Pro Arg Ser Pro Leu Ser Gln Gly
 1          5          10          15
Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val Leu Asn Asn Arg Leu
          20          25          30
Val Gly Leu Ser Val Gly Gln Met His Val Thr Lys Leu Ala Glu Pro
 35          40          45
Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
 50          55          60
Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly Asp Trp Ser
 65          70          75          80
Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr Val Cys Cys
          85          90          95
Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro Thr Leu Asp
          100          105          110
Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
          115          120          125
Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr Ala Phe Leu
          130          135          140
Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
          145          150          155          160
Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe Leu Val
          165          170          175
Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
          180          185          190
Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
          195          200          205
Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
          210          215          220
Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
          225          230          235          240
Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
          245          250          255
Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
          260          265          270
Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
          275          280          285
Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
          290          295          300
Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
          305          310          315          320
Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu
          325          330          335
Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser
          340          345          350
Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly Val Phe Ile
          355          360          365
Cys Cys Trp Phe Thr Ile Leu Tyr Leu Pro Ser Gln Ser Thr Thr Val
          370          375          380

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Ser Ser Ser Thr Ala Arg Leu Asp Gln Ala His Ser Ala Ser Gln Glu
385 390 395 400

<210> 49
<211> 825
<212> DNA
<213> Homo sapiens

<400> 49
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ttcatctgct cgtggttcac catcctttac ctcccaagtc agagcaccac agtctcctcc 780
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<210> 50
<211> 274
<212> PRT
<213> Homo sapiens

<400> 50
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His Pro Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys
20 25 30
Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe
35 40 45
Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
50 55 60
Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
65 70 75 80
Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
85 90 95
Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
100 105 110
Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
115 120 125
Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
130 135 140
Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
145 150 155 160
His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
165 170 175
Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
180 185 190
Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser
195 200 205

Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly
 210 215 220
 Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly Val
 225 230 235 240
 Phe Ile Cys Cys Trp Phe Thr Ile Leu Tyr Leu Pro Ser Gln Ser Thr
 245 250 255
 Thr Val Ser Ser Ser Thr Ala Arg Leu Asp Gln Ala His Ser Ala Ser
 260 265 270
 Gln Gln

<210> 51
 <211> 612
 <212> DNA
 <213> Homo sapiens

<400> 51
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<210> 52
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 52
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 His Gln Thr Gly Ala Arg Trp Arg Pro Leu Pro Gln Arg Glu Ser Gln
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 Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
 35 40 45
 Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
 50 55 60
 Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
 65 70 75 80
 Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
 85 90 95
 Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
 100 105 110
 Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Lys
 115 120 125
 Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu Val Gly Val Thr Trp
 130 135 140
 Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe
 145 150 155 160
 Ala Leu Phe Asn Ser Leu Gln Gly Val Phe Ile Cys Cys Trp Phe Thr

165 170 175
 Ile Leu Tyr Leu Pro Ser Gln Ser Thr Thr Val Ser Ser Ser Thr Ala
 180 185 190
 Arg Leu Asp Gln Ala His Ser Ala Ser Gln Glu
 195 200

<210> 53
 <211> 4036
 <212> DNA
 <213> Homo sapiens

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